

U.S. Application No. 10/796,301  
Docket No. K06-167785M/TBS  
(NGB.376)

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### REMARKS

Applicants concurrently file herewith a Declaration under 37 C.F.R. § 1.132, a Petition for Extension of time, and corresponding extension of time fee.

Claims 1-5, 10-12, 14, and 16 are all of the claims presently pending in the application. Applicants have not amended the claims.

Claims 1-5, 10, 12, 14, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eda et al. (U.S. Patent No. 5,482,127; hereinafter "Eda"), in view of Lewis (U.S. Patent No. 3,234,758). Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Eda in view of Lewis, and further in view of Kobayashi et al. (U.S. Patent No. 6,900,564; hereinafter "Kobayashi").

These rejections are respectfully traversed below.

#### **I. THE CLAIMED INVENTION**

The claimed invention of exemplary claim 1, on the other hand, provides an electric power steering device including a grease including a base oil having a kinetic viscosity of 1000 to 5000 mm<sup>2</sup>/s (40°C), a worked penetration of the grease being not more than 300, and which is charged in a gap between the spline shaft and the cylindrical body, wherein the electric power steering device is devoid of an O-ring between the spline shaft and the cylindrical body (e.g., see Application at page 3, line 20 through page 4, line 5). This combination of features is important for providing an electric power steering device where the O-ring is omitted, so that the productivity can be enhanced, while maintaining an excellent high temperature working property and preventing gear noise (see Application at

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page 3, lines 11-18).

## II. THE PRIOR ART REJECTIONS

### A. Claims 1-5, 10, 12, 14, and 16

The Examiner alleges that Eda would have been combined with Lewis to teach the claimed invention of claims 1-15, 10, 12, 14, and 16. Applicants submit, however, that these references, even if combined, would not teach or suggest each and every feature of the claimed invention.

Applicants point out that in order to establish a *prima facie* case of obviousness "*the prior art reference (or references when combined) must teach or suggest all the claim limitations*" (see M.P.E.P. § 2143; emphasis added).

Applicants submit that the alleged combination of Eda and Lewis fails to teach or suggest an electric power steering device including "*a grease including a base oil having a kinetic viscosity of 1000 to 5000 mm<sup>2</sup>/s (40 °C), a worked penetration of said grease being not more than 300, and which is charged in a gap between said spline shaft and said cylindrical body, wherein the electric power steering device is devoid of an O-ring between said spline shaft and said cylindrical body*", as recited in claim 1, and similarly recited in claims 12 and 14. Eda and Lewis do not even mention a kinetic viscosity of a grease, let alone teach or suggest the specific limitations of the claimed invention.

Indeed, the Examiner does not even allege that Eda nor Lewis (nor any combination thereof) teaches or suggests these features of the claimed invention. The Examiner concedes the alleged combination of Eda and Lewis does not specifically disclose or mention specific greases with kinematic viscosities or worked penetrations within the claimed values of the

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present application (see Office Action dated March 18, 2008 at pages 2-4).

The Examiner, however, alleges that these features of the claimed invention are "well-known".

Applicants submit that the features recited in the claimed invention amount to more than a mere design choice.

Indeed, as pointed out in the Specification (e.g., see pages 1-3), conventional techniques use greases having either low viscosities (e.g., 100 to 300 mm<sup>2</sup>/s) or high viscosities (e.g., 10,000 to 30,000 mm<sup>2</sup>/s). When a grease having a low viscosity is used gear noise is generated in the engagement portion. When a grease having a high viscosity is used, it is difficult to insert and engage the male engagement member with the female engagement member.

According to the claimed invention, a grease having an intermediate viscosity (e.g., 1000 to 5000 mm<sup>2</sup>/s) is used. Use of the claimed intermediate viscosity alleviates the above problems (e.g., see Application at page 13, line 15 through page 14, line 2).

Therefore, the features recited in claim 1 are clearly important and are more than a mere design choice. Therefore, it is clearly erroneous for the Examiner to dismiss these features as "well known" without providing any support for his allegations.

This feature is clearly not taught or suggested by Lewis, which (as pointed out by the Examiner) teaches the use of a high viscosity grease.

Applicants concurrently file herewith a Declaration under 37 C.F.R. § 1.132, including an attached graph (Exhibit 1), which illustrates kinetic viscosity data for a conventional grease for a high temperature specification (MMV), a conventional grease for a normal temperature specification (TA2), and a grease according to the claimed invention (SL-

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v).

Applicants submit that both of the conventional greases have completely different values of kinetic viscosity from that of the grease of the claimed invention (e.g., 1000 to 5000 mm<sup>2</sup>/s (40°C)).

That is, the conventional methods had no idea about using a grease having an intermediate level kinetic viscosity. In stark contrast, the inventors of the claimed invention discovered that one can reduce gear noise by using the grease having the middle level kinetic viscosity. Furthermore, by setting a worked penetration of the grease to no more than 300, deterioration of assembling work is suppressed, and it is possible to provide a device that is devoid of an O-ring.

Therefore, Applicants submit that neither Eda nor Lewis (nor any combination thereof) teaches or suggest the above features of the claimed invention. Furthermore, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness because the Examiner has not provided any support for his erroneous allegations that the above features of the claimed invention are "well-known".

Therefore, Applicants submit that these references, even if combined, would not teach or suggest each and every feature of the claimed invention. Accordingly, the Examiner is respectfully requested to reconsider and withdraw this rejection.

#### B. Claim 11

The Examiner alleges that Kobayashi would have been combined with Eda and Lewis to teach the claimed invention of claim 11.

Applicants submit that claim 11 is patentable for similar reasons to those set forth

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above with respect to claims 1-5, 10, 12, 14, and 16. Accordingly, the Examiner is respectfully requested to reconsider and withdraw this rejection.

### **III. FORMAL MATTERS AND CONCLUSION**

In view of the foregoing, Applicants submit that claims 1-5, 10-12, 14, and 16, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Date:

July 17, 2008

Respectfully Submitted,

  
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Date:

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Respectfully Submitted,



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